MICROIRRIGATION SYSTEM DATA SHEET

SWCD_____ FIELD OFFICE_____

COOPERATOR_____ LOCATION_____

IDENTIFICATION NO._____ ENG. JOB CLASS _____ FIELD NO. _____

1. **RESOURCE AREA**_____ DESIGN SOIL NAME_____

DESCRIPTION OF SOIL_____

_____

RESOURCE AREA_____, DESIGN AREA_____ acres

2. **CROPS:**

a._____ _____ acres

b._____ _____ acres

c._____ _____ acres

d._____ _____ acres

TOTAL _____ acres

3. **WATER SUPPLY:**

SOURCE OF SUPPLY: (Reservoir, Well, Stream, etc.) _____

a. RESERVOIR:

STORAGE _____ ac-ft

AVAILABLE FOR IRRIGATION _____ ac-ft

b. WELL:

MEASURED CAPACITY _____ gpm

STATIC LEVEL _____ ft

MAXIMUM PUMPING LIFT _____ ft

c. STREAM:

MEASURED FLOW (Season of Peak Use) _____ gpm

QUALITY OF WATER (Evidence of suitability) _____

DISTANCE OF SUPPLY SOURCE TO FIELD _____ ft

ELEVATION DIFFERENCE SOURCE TO FIELD _____ ft

4. **TYPE OF POWER TO BE USED** _____

5. **LAYOUT SKETCH** Scale 1" = _____ ft

SKETCH MAP ON GRID OR ATTACH PHOTO OR OVERLAY.

SHOW:
a. Source of Water
b. Major Elevation Differences
c. Row Direction and Spacing
d. Trickle System Layout
e. Plan of Operation
f. Field Obstructions (Gullies, Trees, Buildings, etc.)
g. North Arrow

FIELD NUMBER:				SYSTEM DESIGN
6. **SOIL INFORMATION:**				
a. SOIL (unit, name, or group).....				
b. MOISTURE HOLDING CAPACITY (in/ft)				
c. BASIC INTAKE RATE (in/hr).....				
7. **CROP INFORMATION:**				
a. KIND OF CROP.....				
b. ACREAGE TO BE GROWN.....				
c. MOIST. EXTRACTION ROOT DEPTH (ft)				
d. USE RATE (in/day).....				
8. **DESIGN PROCEDURE:**				
a. APPLICATION RATE (in/day).....				
b. GROSS WATER APPL./IRRIGATION.(in)				
c. WATER APPLICATION EFFICIENCY (%).				
d. NET WATER APPL./IRRIGATION. (in).				
e. HOURS OF OPERATION PER DAY.....				
f. QUANTITY OF WATER REQUIRED (gpm).				

(8f) QUANTITY OF WATER REQUIRED TO MEET PEAK USE =

(8f) $Q = \frac{453 \times \text{Acres} \times \text{in/day use rate}}{\text{Hours Operation/Day} \times \text{Efficiency (Decimal)}}$

9. **SYSTEM SPECIFICATIONS:**

a. COMPONENT SPACINGS, LATERAL #	1	2	3	4	5	6
1. Emitter Spacing (ft).....						
2. Lateral Spacing (ft).....						

b. Emitter Type

Discharge _____ gph at _____Psi, or _____ ft

c. Max. Length Lateral (1) _____ ft, Size _____ in No. of Emitters _____

(2) _____ ft, Size _____ in No. of Emitters _____

d. Pressure Loss, in Lateral Line _____ psi, or _____ ft

e. Total No. of Laterals _____; No. Operating Simultaneously _____,
Total No. of Emitters _____

f. Design Capacity _____ gph

10. **MAIN LINE DESIGN:**
TOTAL MAIN LINE LENGTH _____ ft, KIND OF PIPE _____

STA. TO STA.	Q(GPM)	PIPE DIA. (IN.)	VELOCITY (FPS)	FRICTION HL (FT/100 FT)	TOTAL HL (FT)

11. **PRESSURE REQUIREMENTS:** (HEAD LOSS)

	FEET	PSI
PRESSURE LOSSES IN MAIN LINE.....		
PRESSURE LOSSES IN LATERAL LINE.....		
PRESSURE REQUIRED AT EMITTER INLET.....		
PRESSURE LOSS THROUGH FILTER.....		
MISC. & FITTING LOSSES.....		
ELEVATION DIFFERENCE.....		
PUMP DISCHARGE PRESSURE.....		
PUMPING LIFT.....		
TOTAL PRESSURE REQUIREMENTS.....		

12. **PUMP REQUIREMENTS:** CAPACITY _____ GPM AT _____ PSI, OR _____ FT OF HEAD

13. **LIST OF MATERIALS:**

ITEM	SIZE	UNIT	QUANTITY

DESIGNED BY _____ DATE _____

CHECKED BY _____ DATE _____

APPROVED BY _____ DATE _____

THIS PRACTICE MEETS SPECIFICATIONS

REMARKS/EXCEPTIONS _____

_____

_____

_____

_____

SIGNED _____ DATE _____